

corresponding depressions on an opposite side, the steel plates being stacked one upon another with coincident depressions, so as to provide a proper orientation;

10 a plurality of arc-shaped permanent magnets of alternating poles provided between said sleeve and said rotor iron core, and being circumferentially spaced from one another, said arc-shaped permanent magnets each having a cut-off area on outer perimeter corners of two adjacent permanent magnets so as to form a triangle-shaped region between two adjacent permanent magnets; and

15 a plurality of dividers, each being provided between two adjacent permanent magnets of alternating poles, having:

a base closely engaging with one of the plurality of grooves so that the dividers are secured to the rotor iron core;

a trunk filling a gap between two adjacent permanent magnets so as to prevent said permanent magnets from moving in a circumferential direction; and

20 a rim having a triangle-shaped structure in contact with said cut-off area so as to prevent the permanent magnets from moving in a radial direction.

6. (Amended) The permanent magnet rotor magnet positioning and retaining device of claim 1, wherein said steel plates are silicon steel plates.

25 8. (Amended) The permanent magnet rotor magnet positioning and retaining device of claim 1, wherein said steel plate further comprises a shaft hole in a center thereof and a plurality of narrow arc-shaped holes circumferentially provided around said shaft hole.

9. (Amended) The permanent magnet rotor magnet positioning and retaining device of claim 1, wherein said steel plates are stamp-fabricated.

10. (Amended) The permanent magnet rotor magnet positioning and retaining device of claim 1, wherein four permanent magnets and four dividers are provided.

11. (Amended) The permanent magnet rotor magnet positioning and retaining device of claim 1, wherein said grooves are rectangle-shaped grooves fitting closely with rectangle-shaped bases so that said grooves and said bases are in tight engagement.

12. (Amended) The permanent magnet rotor magnet positioning and retaining device of claim 1, wherein said grooves are trapezoid-shaped grooves fitting closely with trapezoid-shaped bases so that said grooves and bases are engaged in sliding fashion.

13. (Amended) The permanent magnet rotor magnet positioning and retaining device of claim 1, wherein said dividers are made from a hard material having poor magnetic conductivity.

14. (Amended) The permanent magnet rotor magnet positioning and retaining device comprising:

a sleeve having a hollow tubular structure;

a rotor iron core having a plurality of grooves and located inside said sleeve, wherein said rotor iron core includes a plurality of round steel plates stacked together, each steel plate having a plurality of elevations on one side and a plurality of corresponding depressions on an opposite side, the steel plates being stacked one upon another with coincident depressions, so as to provide a proper orientation;

a plurality of arc-shaped permanent magnets of alternating poles provided between said sleeve and said rotor iron core, and being circumferentially spaced from one another, said arc-shaped permanent magnets each having a cut-off area on outer perimeter corners of two adjacent permanent magnets so as to form a triangle-shaped region between two adjacent permanent magnets; wherein

said rotor iron core further comprises a plurality of dividers, each being provided between two adjacent arc-shaped permanent magnets of alternating poles;

each of said dividers, between the rotor iron core and the sleeve, further comprising a base engaged with one of the plurality of grooves so that the dividers are secured to the rotor iron core, a trunk filling a gap between two adjacent

permanent magnets to prevent said permanent magnets from moving in a circumferential direction, and a triangle-shaped rim forming tight engagement with said cut-off area so as to prevent the permanent magnets from moving in a radial direction.

19. (Amended) The permanent magnet rotor positioning and retaining device of claim 14, wherein said steel plates are silicon steel plates.

21. (Amended) The permanent magnet rotor magnet positioning and retaining device of claims 14, wherein said steel plate further comprises a shaft hole in a center thereof and a plurality of narrow arc-shaped holes center thereof and a plurality of narrow arc-shaped holes circumferentially provided around said shaft hole.

22. (Amended) The permanent magnet rotor magnet positioning and retaining device of claims 14, wherein said steel plates are stamp-fabricated.

23. (Amended) The permanent magnet rotor magnet positioning and retaining device of claims 14, wherein four permanent magnets and four dividers are provided.

24. (Amended) The permanent magnet rotor magnet positioning and retaining device of claims 14, wherein said grooves are rectangle-shaped grooves fitting closely with rectangle-shaped bases so that said grooves and said bases are in tight engagement.

25. (Amended) The permanent magnet rotor magnet positioning and retaining device of claims 14, wherein said grooves are trapezoid-shaped grooves fitting closely with trapezoid-shaped bases so that said grooves and said bases are engaged in sliding fashion.

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26. The permanent magnet rotor magnet positioning and retaining device of claims 14, wherein said dividers are made from a hard material having poor magnetic conductivity.--